

Act Now: How Business Customers Can Reduce Natural Gas Use Through Energy Efficiency

1. Install Setback Thermostats or Check Settings on Existing Units

If your facility does not have an energy management system and you haven't installed setback thermostats yet, you are wasting energy and money. Install them now: they ensure that you are not over-heating buildings during non-operating hours. If they are installed, double check their settings and reset them if necessary to match seasonal operating hours and temperature requirements. You will reduce natural gas use by one percent for every one °F you set back the thermostat.

2. Install Boiler System Controls

If your building or process uses a boiler, ensure that system controls are installed. These controls, including outdoor temperature resets, help manage the boiler's operating temperature. They help reduce natural gas use during fall, spring and some winter warm spells. You will reduce natural gas use by 15 percent to 20 percent for noncondensing boilers and up to 40 percent for condensing boilers.

3. Ensure the Energy Management System is Working Properly If your facility has an energy management system, make sure that it is set correctly and operating properly. Systems that are not properly controlled waste energy and money. You can reduce natural gas use by up to 20 percent. If you cannot adjust your system, hire an expert to do it for you.

4. Maintain Steam Systems

A typical industrial facility can reduce natural gas use in steam systems by 20 percent by taking several smart, best practice actions. Many schools, commercial and government buildings also operate steam systems and will save energy by taking these actions.

- Test steam traps, replace defective traps and maintain existing ones. Malfunctioning steam traps waste steam and result in higher boiler fuel consumption. You can reduce your boiler's natural gas use from five percent to ten percent. Simple payback is often one year or less.
- Reduce steam system leaks. Repair leaks in steam piping, condensate return lines and fittings. Wasted steam = wasted energy.
- Insulate piping and valves. If insulation is damaged, replace it. Uninsulated pipes lose heat and cause the boiler to use more natural gas than necessary.
- Tune-up boilers every three months to six months. Routine maintenance can reduce facility energy use by two percent. Do not ignore basic maintenance, it will cost money if you do.
- 5. Implement additional, longer term boiler modifications. Several actions will improve boiler efficiency even further. These include adjusting boiler operations by adding stack economizers, maximizing condensate return, automating blowdown and recovering heat from the blowdown stream, recovering flash steam heat and installing automatic burner controls. These actions will pay for themselves in one year to three years.

5. Optimize Domestic Hot Water Systems

You can take several actions to reduce both natural gas and water use.

- Minimize use. Many businesses can find ways to reduce hot water use. For example, install low flow, high efficiency pre-rinse sprayers at dish washing stations in food service operations, low flow showerheads in lodging facilities and locker rooms and efficient laundry systems.
- 2. Insulate hot water pipes. Add inexpensive insulation to all hot water piping and reduce heat loss.
- Adjust hot water temperatures. Unless high temperature levels are required by code, set water heater temperatures to 120°F. Each 10°F reduction in water temperature will generally save three percent to five percent on water heating costs.
- Install more efficient hot water systems. If you're considering a change, make sure you install energy (and water) efficient units.

6. Install Heat Recovery Systems

Many businesses and farm operations should consider installing heat recovery systems to capture waste heat from refrigeration equipment, boilers, driers, furnaces and other manufacturing processes. This waste heat can then be used to meet other heating or hot water needs and reduce the need for natural gas. If you already have a heat recovery system, make sure it is working properly.

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energystar.gov

The ENERGY STAR program provides information on energy efficient products that meet ENERGY STAR® standards.

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The American Council for an Energy-Efficient Economy (ACEEE) is an additional resource on energy efficient products and information.

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